

Claims

1- A fabric care composition comprising:

i)- a nitrogen containing compound selected from a polyamino-functional polymer, a dye fixing agent, and mixtures thereof, and
ii)- a scum reducing agent selected from a water-soluble cationic surface active agent; a polyoxyalkylene alkyl amine surface active agent, and mixtures thereof; with the proviso that when the sole nitrogen containing compound is a polyamino-functional polymer, the polymer is present in amounts greater than 1% by weight.

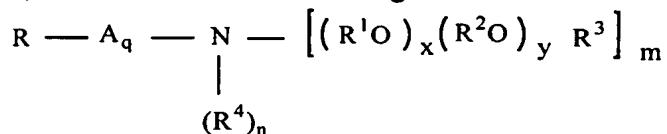
2-A composition according to Claim 1, wherein said water-soluble cationic surface active agent is of formula:



wherein R^1 is $C_{10}-C_{22}$ hydrocarbon group, or the corresponding ester linkage interrupted group with a C_1-C_4 alkylene group between the ester linkage and the N, each R is a C_1-C_4 alkyl or substituted alkyl, or hydrogen, and the counterion X^- is a softener compatible anion.

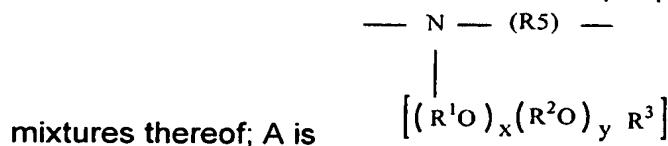
3-A composition according to Claim 2, wherein the water-soluble cationic surfactant is selected from N,N dimethyl-N-(2-hydroxyethyl)-N-dodecyl/tetradecyl ammonium bromide, myristoyl choline ester quaternary methylammonium halides, lauroyl choline ester methylammonium halides, cocoyl choline ester quaternary methylammonium halides, and mixtures thereof.

4- A composition according to any one of Claims 1-3, wherein the polyoxyalkylene alkyl amine surface active agent has the formula:



wherein R is selected from C_7-C_{21} linear alkyl, C_7-C_{21} branched alkyl, C_7-C_{21} linear alkenyl, C_7-C_{21} branched alkenyl, and mixtures thereof; R^1 is ethylene; R^2 is selected from C_3-C_4 linear alkyl, C_3-C_4 branched alkyl, and mixtures thereof; R^3 is selected from hydrogen, C_1-C_4 linear alkyl, C_3-C_4 branched alkyl, and mixtures

thereof; R^4 is selected from hydrogen, C₁-C₄ linear alkyl, C₃-C₄ branched alkyl, and



R^5 is selected from $[(R^1O)_x (R^2O)_y]$ unit, C₁-C₁₆ linear alkyl, C₁-C₁₆ branched alkyl, C₁-C₁₆ linear alkenyl, C₁-C₁₆ branched alkenyl, and mixtures thereof; wherein the index m is 1 or 2, the index n is 0 or 1, provided that when m is equal to 1, n is equal to 1; and when m is 2 n is 0; wherein the index x is from 0 to about 50, preferably from 1 to 25, wherein the index y is from 0 to about 10; wherein the index q is 0 or 1.

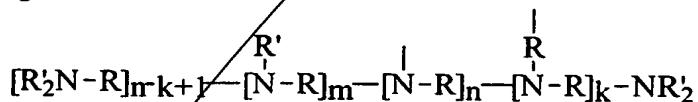
5-A composition according to Claim 4, wherein said index x is from 1 to 25.

6- A composition according to ~~either one of~~ Claim 4 or 5, wherein said index m is equal to 2 and n is equal to 0.

7-A composition according to ~~any one of~~ Claims 4-6, wherein said polymer comprises a polyamine backbone corresponding to the formula:

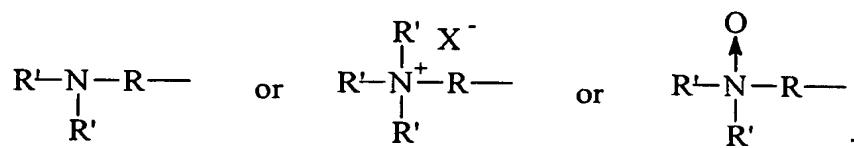


having a polyamine formula $V(n+1)W_mY_nZ$ or a polyamine backbone corresponding to the formula:

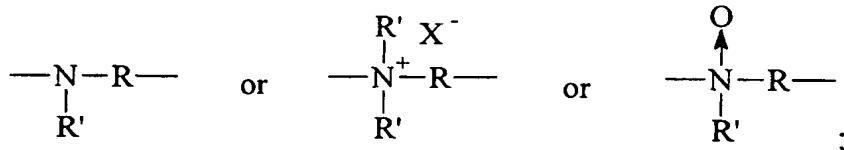


having a polyamine formula $V(n-k+1)W_mY_nY'_kZ$, wherein k is less than or equal to n, said polyamine backbone has a molecular weight greater than 200 daltons, wherein

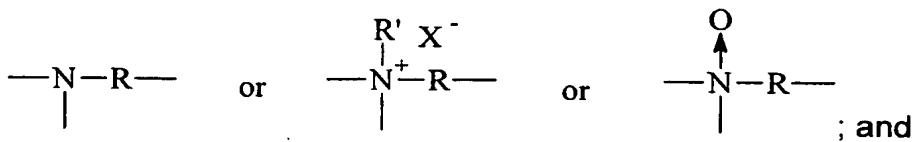
i) V units are terminal units having the formula:



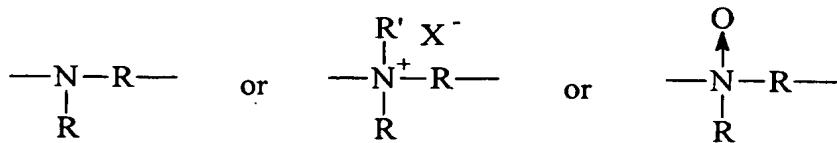
ii) W units are backbone units having the formula:



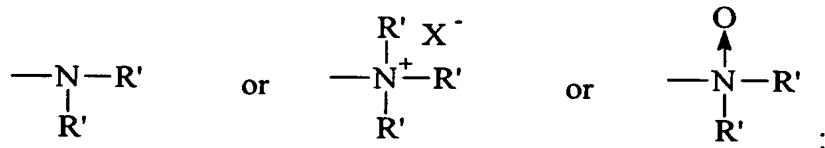
iii) Y units are branching units having the formula:



iv) Y' units are branch point for a backbone or branch ring having the formula:



v) Z units are terminal units having the formula:



wherein backbone linking R units are selected from the group consisting of C₂-C₁₂ alkylene, C₄-C₁₂ alkenylene, C₃-C₁₂ hydroxyalkylene, C₄-C₁₂ dihydroxy-alkylene, C₈-C₁₂ dialkylarylene, -(R¹O)_xR¹-, -(R¹O)_xR⁵(OR¹)_x-, -(CH₂CH(OR²)CH₂O)_z(R¹O)_yR¹(OCH₂CH(OR²)CH₂)_w-, -C(O)(R⁴)_rC(O)-, -CH₂CH(OR²)CH₂-, and mixtures thereof; wherein R¹ is selected from the group consisting of C₂-C₆ alkylene and mixtures thereof; R² is selected from the group consisting of hydrogen, -(R¹O)_xB, and mixtures thereof; R⁴ is selected from the group consisting of C₁-C₁₂ alkylene, C₄-C₁₂ alkenylene, C₈-C₁₂ arylalkylene, C₆-C₁₀ arylene, and mixtures thereof; R⁵ is selected from the group consisting of C₁-C₁₂ alkylene, C₃-C₁₂ hydroxyalkylene, C₄-C₁₂ dihydroxy-alkylene, C₈-C₁₂ dialkylarylene, -C(O)-, -C(O)NHR⁶NHC(O)-, -R¹(OR¹)-, -C(O)(R⁴)_rC(O)-, -CH₂CH(OH)CH₂-, -CH₂CH(OH)CH₂O(R¹O)_yR¹OCH₂CH(OH)CH₂-, and mixtures thereof; R⁶ is selected from the group consisting of C₂-C₁₂ alkylene or C₆-C₁₂ arylene; R' units are selected from the group consisting of hydrogen, C₁-C₂₂ alkyl, C₃-C₂₂ alkenyl, C₇-C₂₂ arylalkyl, C₂-C₂₂ hydroxyalkyl, -(CH₂)_pCO₂M, -(CH₂)_qSO₃M, -CH(CH₂CO₂M)CO₂M, -(CH₂)_pPO₃M, -(R¹O)_xB,

-C(O)R³, and mixtures thereof; B is selected from the group consisting of hydrogen, C₁-C₆ alkyl, -(CH₂)_qSO₃M, -(CH₂)_pCO₂M, -(CH₂)_q(CHSO₃M)CH₂SO₃M, -(CH₂)_q-(CHSO₂M)CH₂SO₃M, -(CH₂)_pPO₃M, -PO₃M, and mixtures thereof; R³ is selected from the group consisting of C₁-C₁₈ alkyl, C₇-C₁₂ arylalkyl, C₇-C₁₂ alkyl substituted aryl, C₆-C₁₂ aryl, and mixtures thereof; M is hydrogen or a water soluble cation in sufficient amount to satisfy charge balance; X is a water soluble anion; m has the value from 2 to 700; n has the value from 0 to 350; p has the value from 1 to 6, q has the value from 0 to 6; r has the value of 0 or 1; w has the value 0 or 1; x has the value from 1 to 100; y has the value from 0 to 100; z has the value 0 or 1.

8-A composition according to ~~any one of~~ Claims 1-7, wherein said dye fixing agent is a cellulose reactive dye fixing agent.

9-A composition according to ~~any one of~~ Claim 1-8, wherein the nitrogen containing compound is of from 1% to 25% by weight, ~~most preferably from 1% to 10% active by weight~~ of the composition.

10- Use of a surface active agent in a composition comprising a nitrogen containing compound selected from a polyamino-functional polymer, a dye fixing agent, and mixtures thereof, for reducing or preventing the formation of scum on fabrics or washing machine parts contacted with the composition.

11-Use according to Claim 9, wherein said surface active agent is selected from a water-soluble cationic surface active agent; a polyoxyalkylene alkyl amine surface active agent, a water-insoluble softening compound, and mixtures thereof.

ADD
a
add B³
add C^z

Ans B